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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,751	06/29/2001	Naomi H. Harley	5986/1H320US1	8214

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DARBY & DARBY P.C.
P. O. BOX 5257
NEW YORK, NY 10150-5257

EXAMINER

HANNAHER, CONSTANTINE

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,751

Applicant(s)

HARLEY ET AL.

Examiner

Constantine Hannaher

Art Unit

2878

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on June 9, 2003. These drawings are not acceptable.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **81a, 82a, 83a, 102, 103, 240**. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not describe a diffusion barrier which generally isolates a solid state nuclear track detector from *radiation* in the internal volume of space as recited by independent claim 1. Instead, the specification consistently describes a diffusion barrier which generally isolates a solid state nuclear track detector from *thoron radiation* in the internal volume of space. Since radon is allowed to enter the internal volume of space of the second and third chambers, see page 7, lines 14-15 of the specification, and radon incontrovertibly decays and thus creates radiation, which radiation (or that of daughters in the radon decay series) may be fairly expected to reach the solid state nuclear track

detector, it is apparent that the diffusion barrier **102, 103** cannot serve to isolate the solid state nuclear track detector from *radiation* without limitation. Thus one skilled in the art is unable to make and use the invention as claimed. The balance of the claims is rejected on the basis of their dependence.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 8-12, 14-24, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harley *et al.* (US005134297A) in view of Lucas (US004975574A).

With respect to independent claim 1, Harley *et al.* discloses a radiation monitor **20** comprising a chamber comprising an electrically conductive housing (column 5, lines 11-17) having walls defining an internal volume of space, at least one hole **32** through a cap **30** of the housing for permitting entry of ambient air into the internal volume of space (column 5, lines 18-23), and a first

solid state nuclear track detector **64** disposed with the housing with a thin electrically conducting cover **52**. The radiation monitor of Harley *et al.* further comprises another solid state nuclear track detector which is generally isolated from radiation in the internal volume of space of the housing (column 7, lines 51-57) but it is not in a separate chamber. Lucas discloses a radiation monitor comprising a first chamber **22A** with a hole **23A** and first solid state nuclear track detector **30** and a second chamber **22B** with a hole **23B** and second solid state nuclear track detector **30**. In view of the advantageous shielding of second solid state nuclear track detector **30** in the second chamber **22B** from unintentional and stray alpha radiation as described by Lucas (column 9, lines 22-44) it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the radiation monitor **20** of Harley *et al.* to comprise a second chamber for the additional solid state nuclear track detector **64** which is generally isolated from radiation. The radiation monitor **20** of Harley *et al.* further comprises diffusion barrier **37** (column 5, lines 56-62). In view of a third solid state nuclear track material in the radiation monitor **20** of Harley *et al.*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the radiation monitor further to establish a separate chamber therefor such that each detector responded only to radiation from its own internal volume of space. Although there is no claim requirement that prevents the first chamber from comprising a diffusion barrier, it may be noted that elements **24** closing up the holes **23A**, **23B** in the radiation monitor of Lucas are intended as mechanical filters (column 6, lines 51-53) and do not serve as a barrier to any radioactive gas. Accordingly, in view of the ability to compare radiation measurements of chambers with a diffusion barrier and a chamber without a diffusion barrier, when Harley *et al.* already supplies a redundant third detector (claim 16), it would have been obvious to one of ordinary skill in the art at the time the invention was made to leave off the diffusion barrier for a first chamber.

With respect to dependent claim 8, the radiation monitor **20** of Harley *et al.* further comprises a fastening portion **22**.

With respect to dependent claim 9, there is generally no electrical charge present on the radiation monitor **20** of Harley *et al.* (column 7, lines 6-7).

With respect to dependent claim 10, the arrangement of multiple chambers in the radiation monitor suggested by Harley *et al.* and Lucas is a choice within the ordinary skill in the art in view of the desired performance.

With respect to dependent claim 11, the housing suggested by Harley *et al.* is cylindrically shaped (column 6, line 9).

With respect to dependent claim 12, the housing suggested by Harley *et al.* is made of an electrically conductive material that shields the inside of the housing (that is to say, its internal volume of space) from radiation (column 5, lines 15-17). Lucas confirms that a radiation shielding material is desirable (column 6, lines 35-45).

With respect to dependent claim 14, Harley *et al.* identifies the three solid state nuclear track detectors as "film" (column 6, line 59).

With respect to dependent claim 15, Harley *et al.* identifies allyl diglycol carbonate as a suitable material for the three solid state nuclear track detectors (column 6, line 59).

With respect to dependent claim 16, Harley *et al.* identifies cellulose acetate as a suitable material for the three solid state nuclear track detectors (column 2, line 41).

With respect to dependent claim 17, the chamber of Harley *et al.* comprises a conducting foam **37**. The prevention of the entry of dust is described by Lucas (column 6, lines 51-53) as a useful characteristic for the material at the holes. Accordingly, it would have been obvious to one of

ordinary skill in the art at the time the invention was made that the foam **37** of Harley *et al.* placed at the holes of the chamber served to generally prevent the entry of dust.

With respect to dependent claim 18, a redundant arrangement is already present in the radiation monitor **20** of Harley *et al.* It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the monitor suggested by Harley *et al.* and Lucas comprise as many chambers as thought desirable in view of the performance desired of confirming the measurement in one chamber with a measurement from another, similarly constructed chamber in close physical proximity.

With respect to dependent claim 19, the radiation monitor **20** of Harley *et al.* further comprises a fastening portion **22**. Additional fastening portions would have been within the ordinary skill in the art in order to provide flexibility for the ultimate user.

With respect to dependent claim 20, the radiation monitor **20** of Harley *et al.* further comprises a fastening portion **22**.

With respect to dependent claim 21, there is generally no electrical charge present on the radiation monitor **20** of Harley *et al.* (column 7, lines 6-7).

With respect to dependent claim 22, the arrangement of multiple chambers in the radiation monitor suggested by Harley *et al.* and Lucas is a choice within the ordinary skill in the art in view of the desired performance.

With respect to dependent claim 23, the housing suggested by Harley *et al.* is cylindrically shaped (column 6, line 9).

With respect to dependent claim 24, the housing suggested by Harley *et al.* is made of an electrically conductive material that shields the inside of the housing (that is to say, its internal

volume of space) from radiation (column 5, lines 15-17). Lucas confirms that a radiation shielding material is desirable (column 6, lines 35-45).

With respect to dependent claim 26, Harley *et al.* identifies the three solid state nuclear track detectors as “film” (column 6, line 59).

With respect to dependent claim 27, Harley *et al.* identifies allyl diglycol carbonate as a suitable material for the three solid state nuclear track detectors (column 6, line 59).

With respect to dependent claim 28, Harley *et al.* identifies cellulose acetate as a suitable material for the three solid state nuclear track detectors (column 2, line 41).

With respect to dependent claim 29, the chamber of Harley *et al.* comprises a conducting foam 37. The prevention of the entry of dust is described by Lucas (column 6, lines 51-53) as a useful characteristic for the material at the holes. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the foam 37 of Harley *et al.* placed at the holes of the chamber served to generally prevent the entry of dust.

Response to Submission(s)

8. The amendment filed June 9, 2003 has been entered.

9. Applicant's arguments filed June 9, 2003 have been fully considered but they are not persuasive.

The solid state nuclear track detectors are not “generally” isolated from radiation in the internal volume of space in the respective housing if radiation in the internal volume of space in the respective housing can reach the solid state nuclear track detector within *as is necessary for the second and third chambers to operate.*

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations

of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

For at least the reasons explained above, Applicant is not entitled to a favorable determination of patentability in view of the arguments submitted June 9, 2003.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Art Unit: 2878

ch
July 15, 2003

Constantine Hannaher
Constantine Hannaher
Primary Examiner